



## A new species of *Underwoodisaurus* (Squamata: Gekkota: Carphodactylidae) from the Pilbara region of Western Australia

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### Abstract

Ongoing surveys and systematic work focused on the Pilbara region in Western Australia have revealed the existence of numerous unrecognized species of reptiles. Here we describe *Underwoodisaurus seorsus* **sp. nov.**, a new species similar to *U. milii*, but differing in its relatively plain dorsal and head patterns with only sparsely scattered pale tubercles, a much more gracile build, including longer snout, limbs and digits, smaller and more numerous fine scales on the dorsum, and the enlarged tubercles on the tail tending not to form transverse rows. The new species is known from few specimens and has only been encountered at mid elevations in the Hamersley Ranges, widely separated from the closest populations of *U. milii* in the northern Goldfields and Shark Bay in Western Australia. Given its rarity and small (potentially relictual) distribution this species may be of conservation concern.

**Key words:** conservation, gecko, *Underwoodisaurus milii*, relictual distribution

### Introduction

The Pilbara region of Western Australia supports one of the most diverse reptile faunas on the Australian continent (How & Cowan 2006; Powney *et al.* 2010). Species diversity within the Pilbara, however, is currently underestimated (Doughty *et al.* 2011a). Ongoing surveys by government departments and consulting companies for environmental impact statements for mining proposals have continued to improve collections of reptile specimens from the Pilbara. In many cases, these collections have provided crucial additional material (including tissue samples for genetic analyses) of suspected new taxa based on few specimens, or have discovered entirely new species (Aplin *et al.* 2006; Pepper *et al.* 2006; Horner 2007; Smith & Adams 2007; Shoo *et al.* 2008; Mecke *et al.* 2009; Doughty *et al.* 2010, 2011b; Oliver *et al.* 2010).

The gecko fauna of the Pilbara is especially diverse with over 40 described species representing all four families found in Australia. The carphodactylid geckos are currently represented in the Pilbara by three species in two relatively closely related genera (indeed until a recent revision many authors placed all three species in the same genus, *Nephrurus* (Oliver and Bauer 2011)). Pilbara *Nephrurus* include two relatively common and widespread endemic subspecies; *N. levis pilbarensis* and *N. wheeleri cinctus* (Storr 1963). The second genus present, *Underwoodisaurus* is much rarer, and known from relatively few specimens and scattered observational records from the Hamersley Range (including the Packsaddle Range) in the southern Pilbara region (Menz and Cullen 2006; Thompson *et al.* 2009). Currently these specimens are referred to *Underwoodisaurus milii* (the single recognized species in this genus); however, they are separated from the nearest populations of *U. milii* by over 450 km to the south-east (in the northern Goldfields) and 600 km to the south-west (Fig. 1). The first specimen of the Pilbara *Underwoodisaurus* was collected in 1997, but lack of further specimens prevented a proper assessment of its taxonomic distinctiveness. Recent collections and photographic records have provided sufficient material for a comparison with *U. milii* and evidence to warrant its formal description as a new species.